

REMARKS

1. Claim Rejections – 35 U.S.C. 112

Claims 1, 11 and 18 were rejected under 35 U.S.C. 112, second paragraph, for being indefinite due to the use of the phrase “possibly defected memory”.

5 Response

Claims 1 and 11 have been amended to read “A method for determining whether a memory is defected or has integrity”. As these claims now refer to a method with two definite outcomes (i.e. the memory is determined to be defective or to have integrity) the applicant believes the 112 rejections have been overcome. Claim 18 has been amended to
10 read “A method for determining integrity of a memory with sections that are defective”. As the claim now refers to a memory that has defective sections, the applicant believes the subject matter is definite, and that the 112 rejections have been overcome.

2. Claim Rejections – 35 U.S.C. 103(a)

Claims 1 – 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over
15 Brauch et al. in view of Brennan, Ciaran J. and further in view of Fukuhisa et al.

Response

Claims 1, 11 and 18

As acknowledged by the Examiner, Brauch et al. does not teach testing a memory under a plurality of operating environments. Furthermore, the Examiner acknowledges
20 that: “Brauch et al. in view of Brennan do not teach comparing test results of the plurality of operating environments with each other”.

Also as stated by the Examiner on page 5 of the current Office Action, Fukuhisa

teaches “Next BIST is performed, **the results of the BIST are compared with the expected value**, and the results are accumulated (step 204)”, and “at this point, **the number of defective parts and the number of redundancy circuits are compared**” (Col.5, lines 23 – 46).

5 However, the applicant respectfully asserts that Fukuhisa fails to teach the claimed features of “**comparing the recorded results** for each of the plurality of operating environments, wherein **if the results are the same** for each of the plurality of operating environments then **the memory is determined to have integrity**” (*emphasis added*). Please note that “integrity” and “number of defects” are different things. “Defect” as
10 known to those skilled in the art means that the memory may give an incorrect reading. Integrity is defined differently in both the claim and at least in the present paragraph [0005]. Fukuhisa determines integrity as a number of defective parts being fewer than a number of redundancy circuits (Col.6, lines 1 – 6), whereas the present claims define integrity as a number of defects of a memory being consistent under all tested operating
15 environments.

The difference is fundamental to the dissimilar methods and results of the respective inventions. Fukuhisa determines whether the number of defects within a memory is small enough so that they can be repaired using redundancy circuits. It is true that the measured defects may occur under different environmental conditions, but the end determination
20 results from comparing the total number of defective parts with the number of redundancy circuits (Col.5, lines 40 – 44).

On the other hand, the present claims are not necessarily concerned with the number of defects and/or redundancy circuits in the memory, but whether the results of the memory test remain constant across a variety of environmental conditions (present
25 paragraphs [0006] and [0027]). That these two methods yield different real world results is obvious. For a non-limiting ready example, it is quite possible that Fukuhisa will deem

a memory “repairable” (Col.5, lines 40 – 44) and thus useful while the present method may find the same memory lacking in integrity and thus not useful (present paragraph [0027]). Furthermore, to determine integrity, the present claims must test the memory under all operating environments in order to compare the test results with each other. As
5 is clearly shown in Fukuhisa, FIG.6, if the memory fails under a first operating environment then no further testing will be performed, and the memory will be determined to not have integrity. The present claims, however, will find the same memory to have integrity if the number of defects of the memory under all operating environments is the same.

10 Fukuhisa compares individual results to an “expected value” and determines whether the number of defects exceeds a threshold (the number of redundancy circuits), but does not compare the results with other results. Therefore Fukuhisa fails to teach “**comparing the recorded results** for each of the plurality of operating environments, wherein **if the results are the same for each of the plurality of operating environments then the**
15 **memory is determined to have integrity**” (*emphasis added*) as is claimed and all claimed features must be met.

The applicant therefore respectfully asserts that the cited references, separately or combined, neither teach nor suggest the features of the claimed invention, and that claims 1, 11 and 18 should be found allowable.

20 Claims 2 – 10

Claims 2 – 10 are dependent on Claim 1 and should be found allowable if Claim 1 is found allowable.

Claims 12 – 17

Claims 12 – 17 are dependent on Claim 11 and should be found allowable if Claim

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11 is found allowable.

Claims 19 – 20

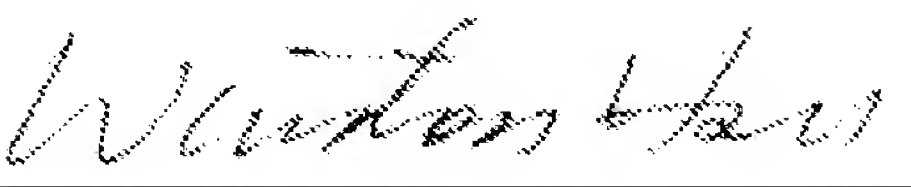
Claims 19 – 20 are dependent on Claim 18 and should be found allowable if Claim 18 is found allowable.

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Conclusion:

Thus, all pending claims are submitted to be in condition for allowance with respect to the cited art for at least the reasons presented above. The Examiner is encouraged to telephone the undersigned if there are informalities that can be resolved in a phone
10 conversation, or if the Examiner has any ideas or suggestions for further advancing the prosecution of this case.

Sincerely yours,

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Note: Please leave a message in my voice mail if you need to talk to me. (The time in D.C. is 13 hours behind the Taiwan time, i.e. 9 AM in D.C. = 10 PM in Taiwan.)